ABSTRACT OF THE DISCLOSURE

A transmitter comprises: an N-channel input side multi-port directional coupler which inputs thereto transmission signals of N channels and outputs signals of N channels, the input side multi-port directional coupler being implemented by digital signal processing. Digital signal processing type predistorters of N channels for linearizing respective transmission channels; digital-to-analog converters of N channels which input thereto the output signals from the digital signal processing type predistorters of N channels; and transmitting parts of N channels each including the output signal from the corresponding one of the digital-to-analog converters of N channels and an amplifier; and an N-channel output side multi-port power combiner which inputs thereto the output signals from the transmitting parts of N channels and outputs signals of N channels.